

Transfer of Land Use Rights in China: Results from a Survey of Rural

Households in 8 Counties of Hebei Province

Wen Yan ^{*1}, K. K. Klein ²

^{*1}Hebei Finance University, Baoding, Hebei, PRC

²Department of Economics, University of Lethbridge, Lethbridge, Alberta, Canada

^{*1}wassx@126.com; ²klein@uleth.ca

Abstract

The paper aims to determine why the rate of land use transfers in the selected region Hebei province has been so low compared with the average by the introduction of possible factors that may have an impact on rural households' willingness to transfer land use right and as well to find out the decisive factors so as to propose implications accordingly. Econometric results indicate that the absence of a social security system in rural areas, the lack of freedom of many farm households to negotiate the terms of transfers of their land use rights, and the low proportion of total household income that comes from non-farm sources are the main factors that can explain this phenomenon.

Keywords

Land Use Rights; Household Responsibility System; Land Ownership; China

Introduction

For almost thirty years, an effective system of contracting out agricultural land in China, called the Household Responsibility System (HRS), has helped to transform the countryside. Under this system, the former collective landholdings of a production team were divided more or less equally among the member households (Liu et al., 1998). In the 1980s, the profit incentives introduced by the HRS became a powerful motivator to improve agricultural productivity and brought increased prosperity to the rural regions of China. Between 1979 and 1984, the value of agricultural output (in constant prices) grew at an average of 7.5% per year (Lin, 1988; McMillan et al., 1989). However, with time, shortcomings of the HRS have been exposed. The system hindered the mechanisation and modernisation of agriculture and led to scattered and inefficient use of capital, technology and agricultural labour. In the 1980s, frequent land readjustments among households were imposed by governments. Although these

readjustments were designed to adapt to the economic conditions, they also hindered farming investments by rural households. The apparent inability of the HRS to sustain growth in agricultural productivity led to calling for further reform of China's land tenure system (Dong, 1996).

Farmers in China have the rights to use specific parcels of land but do not have full property rights as all rural land is collectively owned. However, "collectively owned" is a vague concept and there is no legal description of the boundary of rights of relevant individuals and organisations, which, in practice, means there is no legal entity that has complete ownership. Farmers cannot sell or buy land, only the rights to use the land. Improving the ability to transfer the rights to use the agricultural land could facilitate improvements in agricultural productivity in China.

China is typical of a dual economy state, characterized by great income disparities between agricultural and urban jobs (both long-term and temporary). This has led to a vast transfer of the labour force from low to high wage sectors. Because of low productivity and low incomes in agriculture, as well as much better living conditions in urban areas, an estimated 18 million people have migrated from rural areas to cities annually in recent years (UNPFA, 2007). China's urban population has outnumbered rural population for first time since the end of 2011 (NBS, 2012). This rapid urbanisation of China's population has resulted in large areas of rural land cultivated by the less productive elderly. Much of the land cultivated by households is underutilized. At the same time, there are some larger and more efficient farmers, including some agricultural corporations, who wish to enlarge their farming scale and produce more output. With improved ability and willingness to transfer the rights to use farm land, scattered land that is not farmed efficiently could be matched with other productive

resources to improve agricultural productivity.

The Chinese government has attempted to find ways to encourage greater productivity in agriculture by making changes on laws that have affected agricultural land property and transference rights. By the end of 2009, the amount of agricultural land transferred from one user to another in China was reported to be 8,239,700 hectares, which accounted for 10.12% of the total agricultural land base in China (Yan, 2010). However, farmers in Hebei, a large province in northern China, have been slow to transfer rights to use their land. By the end of 2009, the total area transferred accounted for only 4.8% of the arable land in that province (Yan, 2010). Moreover, most of the transfers of land use rights in Hebei have been informal verbal agreements with few formal contracts signed.

The purpose of this study is to investigate the reasons why the transfers of land use rights in Hebei have occurred at such a low rate. This study seeks to determine the importance of such factors as the absence of a social security system in rural areas, the freedom of farm households to negotiate their own transfers, family size, net returns obtained from their farming operations, educational level, and the proportion of total household income that comes from non-farm sources on the willingness of Hebei farmers to transfer their agricultural land use rights.

Results from this study should be useful to policy makers in Hebei who are concerned about increasing the transference of agricultural land use rights. The results also have implications for the transference of agricultural land in other provinces in China.

The paper is organized as follows. The second section provides additional background materials, including a short history of rural land reform in China and the current legal framework for land policy in China. The third section reviews and analyzes relevant literature on property rights in China. The fourth section presents details of a survey conducted in eight counties of Hebei and provides an analysis of household responses to questions on their willingness to transfer their land use rights. Implications and conclusions from the study are presented in the final section.

History of Rural Land Reform in China

After the foundation of the People's Republic of China (PRC) in 1949, radical transformation and reforms of the country were carried out, including land reform.

During the period 1949–1953, control of land was taken from the large and wealthy landowners and then redistributed to peasant farmers. However, private ownership of all land by the farmers remained in the policy. Beginning in 1953, the private ownership of land was converted to collective ownership where individual peasant farmers worked together as members of a collective. In 1978, a group of farmers in Xiaogang village of Anhui province sparked the reform of rural land policies. At the risk of arrest and imprisonment, they collectively broke the law by secretly contracting out land in their village. This illegal activity then was made legal by the Chinese Communist Party (CCP) and a new system of contracting out land, called the Household Responsibility System (HRS), was extended across the country. Since 1984, farmers typically were given the right to use assigned areas of land for their own use for a period of fifteen years. This was extended to 30 years in 1993. In 1998, the Chinese government passed the Land Management Law, which formalized the farmers' land use rights by providing them with legal written contracts.

In 2003, the law on Land Contracts in Rural Areas came into effect. This law has encouraged and protected the voluntary transfer of land use rights (with compensation) as well as has given rural households the right to manage and profit from a specified piece of agricultural land previously owned collectively by the peasants, including arable land, forestlands, grasslands and other lands used for agriculture by the permission of the transfer of the right to use that piece of land wholly or partially to a third party as long as there is no change in the nature of the land use. Under the law, local authorities can neither revise the contract nor reclaim the land awarded during the course of the contract. Further, it empowers farmers to transfer, re-contract, enter into share-holding ventures, and exchange land use rights with each other.

The Administrative Regulations Governing, the Circulation of the Right to Land Contractual Management in rural areas went into effect in March 2005. These are special regulations that prescribe all aspects of land use transfers, including the subject eligible to purchase land use rights, guidelines for prices, types of land use transfer (such as sub-contracting, leasing, exchanging and joint share-holding), transfer period, and specific registration procedures.

The Real Right Law, which came into effect on 1

October, 2007, confirms that the holder of land use rights can transfer those rights. Any contracted land cannot be used for non-agricultural purposes without approval.

In 2008, the Third Plenum of the 17th Central Committee of the CCP sought to further reform and develop the countryside by encouraging Chinese farmers to transfer their agricultural land use rights under the HRS. To smooth this process, farmers were granted land use contracts of indeterminate length. This political encouragement is likely to guide land use decisions of many farmers in the future and indicates that further reforms, including subsidies that reduce the transfer costs, might be expected in the future.

Issues Related to Tenure of Rural Land in China

The most significant characteristic of China's land system is its binary urban and rural arrangement. According to the Chinese Constitution (as revised in 1982), urban land is owned by the state and rural land by the rural collectives. This constitutional arrangement sometimes has been called "two-tier" land ownership (Dong, 1996; Piotrowski, 2008). This resulted in the insecurity and vagueness of China's rural land tenure, which is attributed to the collective nature of land ownership (Kung, 1995). The insecure land tenure system in rural China has long been criticized in the following two major aspects.

First, because the central government has repeatedly tinkered with the scale, scope and structure of village administration, it has been unclear who actually owns rural land (Ho, 2001). Collective ownership has been increasingly problematic to villagers because individuals have no demonstrable rights to the management and transfer of their collective property, nor do they have voice in the distribution of land-related compensation. These ambiguities with respect to collective ownership create loopholes in which local political elites can manoeuvre (Po, 2008).

The second criticism relates to how insecure land tenure affects agriculture productivity. A 1990 World Bank working paper showed that insecurity of land tenure did not appear to affect investment before 1989. However, investment in the years past the mid-point of the term of the contract may be more sensitive to perceptions regarding land reallocation (Feder et al., 1990). Prosterman et al. (1996) also observed that tenure insecurity discouraged investment in

agriculture and lowered economic growth. Brandt et al. (2002) found that property rights affect farmers' investment incentives and productivity. However, arguments also have been made that insecure tenure did not constrain household's investment on farming. Instead, frequent adjustments of farm holdings among peasant families or insecure tenure have undermined their incentive to invest in stable crop production (Kung, 1995).

It has been shown that the household responsibility system brought about a rapid increase in agricultural production (Dong, 1996; Xu, 2007; Brandt et al., 2002; Liu et al., 1998). However, the administrative land allocation based on the household responsibility system tends to equalize the land-to-labour ratio but disregards contributions of other resources such as farm implements, financial capital and human skills. This results in mismatching of land with other productive resources and reductions in agricultural output and economic efficiency (Zhang et al., 2004). Criticisms focus on two main aspects. One is the dwindling farm size and excessive fragmentation of farmland (Dong, 1996; Tang, 2008), and the other is the observation of a noticeable decline in investment in farmland. In the absence of a stable set of long-term land use rights and security of tenure, farmers tend to reduce their investments in land, thereby adversely affecting long-term growth of agricultural output (Kung, 2000; Tang, 2008).

Development of a market system for allocating rural land use in China has been the focus of recent research in rural development during China's economic reform. It was found that strong market demand, as a result of industrialisation and urbanisation, has stimulated the emergence of a new market in rural collectively-held land (Ho and Lin, 2003; Jiang and Liu, 2003). This market for land transfer (sometimes called the land rental market) can enhance productivity by transferring land to more productive users at low cost and facilitate less skilled producers' participation in the nonfarm economy (Deininger and Jin, 2005). Jin and Deininger (2009), using data of a large household level panel, further estimated gains in productivity of land use via land rental in a growing economy that can amount to productivity increases of some 60%.

Although some worry has been expressed that a market system for allocating rural land might lead to income inequalities, Zhang et al. (2004), in a study in the rural areas of Zhejiang province, found that

widening disparities in land use rights and farm income did not constitute a retreat from equality. Rather, voluntary land exchanges had compensatory effects on overall inequality as the exchanges in land led to more optimal matches between land and other productive resources, thereby raising agricultural productivity. Ho and Lin (2003) also argued that developing the land market helped to allocate land more efficiently. Studies on the land lease market came to the same conclusion where land leases were found to be an effective way to bring about efficient resource allocation (Yao, 2000a). Zhang et al. (2004) found that the sorting mechanism of the land market increased efficiency.

However, only a relatively small number of market transactions have occurred for rural land in China. A survey conducted in eight counties across China in 1998 showed that only 3-4% of the rural land was leased (Li et al., 1998). The percentage was higher in Zhejiang province, but still only 7-8% (Li et al., 1998). Yao (2000a) conducted a survey in a semi-industrialized region of Zhejiang province and found that although agricultural income consisted only of a minimal percentage of a household's total income, only a few households had stopped farming their land.

Because of the slowly developing market for farmland, arguments have been made that the farmland lease market is restricted by the existing land tenure system (Song et al., 2008; Prosterman et al., 1999). Piotrowski (2008) concluded that the land rental market fell short of its potential efficiency because of numerous imperfections in the land use rights transfer mechanism. Li (2003) argued that continuing administrative land readjustments have been a substantial obstacle to the development of markets for rural land use rights in China because transferees cannot be certain that the land they obtain through transfer will not be subject to administrative readjustment during the transfer term.

Many studies have been conducted on the relationship between the land market and off-farm employment opportunities. Kung (2002) explained the development of a land rental market in China as a response to the development of another factor market, the off-farm labour market, and found that as the labour market develops, the benefits accruing to land rental transactions rise. Other studies also have found that land transfers were correlated positively with the

occupational movement of farmers away from agriculture (Do and Huang, 2005; Feng et al., 2008). As an increasing number of villagers have obtained off-farm employment, the amount of land potentially available for leasing has increased correspondingly (Yao, 2000a). Zhang et al. (2004) found that having off-farm jobs was the major cause of farmers transferring their land use rights to other users. Piotrowski (2008) also found that the rural land rental market in Shandong was driven mainly by the off-farm labour market. A 2001 survey in Guangyang town in Chongqing City showed that farmers would be more likely to transfer their land use rights to professional farmers or agricultural companies if they had stable non-agricultural jobs. Temporary off-farm jobs resulted in fewer transfers of land use rights. Therefore, increased opportunities for stable full-time off-farm employment seem to be a prerequisite for increased transfers of land use rights and large-scale farming (Song et al., 2008).

Another criticism of China's rural land situation is the misuse of arable land (Ho and Lin, 2003; Tang and Chung, 2002). Despite national efforts to constrain the loss of farmland, these losses have continued (Brown, 1995). Since 1987, arable land in China has suffered an annual net loss of 0.3% and this has accelerated to 1% since 2000 (Heerink et al., 2009).

Empirical Study

Survey of Rural Households in Hebei Province

Hebei province, located in northern China (Figure 1), with a population of 70.34 million: about 62% rural and 38% urban, whose gross domestic product per capita reached 16,570 RMB in 2006 (HPBS, 2007), is a typical agricultural province with arable land of 5,901,400 hectares and one of the three main wheat growing areas in China. In an effort to understand why land transfers in Hebei have developed slowly compared with the average in China, a survey was conducted in eight counties of the province (Figure 1) from May to September 2009. The counties have different levels of economic development and include mountainous areas where arable land is more scattered (Xuanhua, Mancheng and Yixian counties), plain areas where cultivation is easier (Renqiu, Luquan and Xingtaixian counties) and coastal areas where the economic conditions are better (Shanhaiguan and Laoting). The main characteristics

of the eight counties are shown in Table 1.

Graduate student assistants at Hebei Agricultural University conducted the interviews in several villages in each county. Six hundred questionnaires were distributed in a number of villages in each of the eight counties. Semi-structured interviews were conducted with those identified and complete responses obtained from 539 respondents. Though not systematically random, the large number of respondents from a number of villages in each of the carefully selected counties provided some assurance of meaningful results. Questionnaires were designed to solicit data on farmers' willingness to transfer their land use rights along with their personal and households' characteristics and income status. The survey data were entered into an EXCEL spread sheet to produce frequency and descriptive statistics.

Following a descriptive analysis of the data, a logistic analysis was conducted to determine the probability that a given household would be willing to transfer their land use rights. The willingness to transfer their land use rights is a binary outcome because a single household either is or is not willing to transfer the rights. The empirical model was specified as:

$$\text{logit}(P) = b_0 + b_1 X_1 + \dots + b_6 X_6 + \varepsilon \quad (1)$$

where P represents the household's probability of transferring (taking on a value of 1 if the farmer is willing to transfer and 0 if not willing). The independent variables (X_i , $i = 1, \dots, 6$) were chosen to represent factors that were hypothesized to affect the decision whether or not the household was willing to transfer their land use rights. The coefficients of the logistic model were estimated with E-views software. The variables were used and their hypothesized effects have been described below.



FIGURE 1 MAP OF CHINA AND HEBEI PROVINCE WITH THE LOCATIONS OF THE EIGHT COUNTIES MARKED

TABLE 1 SOCIOECONOMIC CHARACTERISTICS OF THE EIGHT COUNTIES

| Selected County | Total Arable land (Ha) | Rural Population (Thousand) | Per Capita Annual Income (RMB) | Sample Size |
|-----------------|------------------------|-----------------------------|--------------------------------|-------------|
| Shanhaiguan | 3,087 | 314 | 4942 | 21 |
| Laoting | 62,86 | 432 | 5910 | 97 |
| Xuanhuaxian | 41,02 | 256 | 3101 | 57 |
| Luquan | 28,60 | 314 | 5866 | 40 |
| Xingtaixian | 36,96 | 375 | 4102 | 102 |
| Renqiu | 61,00 | 575 | 4719 | 39 |
| Yixian | 41,33 | 505 | 2846 | 70 |
| Mancheng | 3280 | 347 | 4140 | 113 |

Sources: Data in the first, fourth, fifth and sixth columns were retrieved from 2006 Hebei Agricultural Statistical Yearbook, Hebei Provincial Bureau of Statistics. Data in the second and the third columns were retrieved from 2006 Hebei Land Statistical Yearbook (HMLR, 2007)

On the basis of results found by earlier researchers, preliminary assessments of the questionnaires, and comments by government officials, six factors were hypothesized to affect the willingness of farmers to transfer their land use rights: (1) their assessment of adequacy of social security, (2) their assessment of freedom to transfer their land use rights at a reasonable price, (3) number of individuals living in the household, (4) net farm income after deducting variable costs of production, (5) educational level of head of household, and (6) ratio of off-farm income to total household income.

The first hypothesized factor is the adequacy of the social security system. In an empirical study of land transfer willingness in six suburban areas of Beijing, He and Xu (2007) found that the availability of social security increased farmers' willingness to transfer their land use rights. It was expected that the better the social security system is, the less dependence farmers would have on the land and therefore the more willingness to transfer their land use rights.

The second factor was the farmer's level of freedom to transfer the land use rights to any qualified individuals or entities both within and outside the collective organisation at a reasonable price. In a well-known article that analyzed the Chinese rural land system, Yao (2000b) pointed out that incomplete rights to transfer land use can limit farmers' investments on their land and decrease the land transference efficiency. Therefore, it was hypothesized that a high level of freedom to transfer, meaning less intervention from local cadres or other political powers, would have a positive effect on their willingness to transfer their land use rights. If they felt they had complete control over transfers of their land use rights, including when, how, to whom and where, they were

coded as having full freedom. If they were totally directed by the collective organisation, they were considered as having no freedom. For example, in some circumstances, they can not oppose the decision of “collecting land and leasing out at one time” made by the collective organisation. If they were guided or induced by the collective organisation when deciding to whom they can transfer their land use rights or if they were forced to transfer them at a fixed price, they were coded as having partial freedom.

The third factor was family size. Han (2003) found that the higher the per capita land in the household was, the more willing it was to transfer its land use right. Thus, it was hypothesized that larger family size would be negatively correlated with willingness to transfer land use rights.

The fourth factor was net farm income after deducting variable costs of production. In an empirical study in Nanjing, Jiangsu province, Du and Huang (2005) found that the influence of net farming returns on farmers’ willingness to transfer land use rights was complicated. Higher farming returns may lead to less willingness since there would be higher opportunity cost. However, smaller farming returns may lead to both more willingness (since farmers have lost hope of profiting from farming) and less willingness (since farmers having no other abilities may depend heavily on farming income, even if that is small). Although the factor is considered important, no hypothesis about expected sign is offered.

The fifth factor was level of education of the head of the household. Based on a willingness to transfer land study in Bishan county of Chongqing City, Feng et al. (2008) found that farmer’s education is closely related to their willingness to transfer land use rights since well-educated farmers can more easily find off-farm jobs and adapt to changes. Therefore, it was hypothesized in this study that farmers with more education would be more willing to transfer their land use rights.

The sixth factor was the ratio of non-farm income to total household income. Kung (2002) and Brandt et al. (2004) found that land use transfers correlate positively with the occupational movement of farmers away from agriculture. Zhang et al. (2004) also found that having off-farm jobs was the major determinant of farmers’ willingness to transfer their land use rights to other users. Huang et al. (2011) pointed out that it is transfer-out activities rather than the transfer-in activities that are encouraged by off-farm jobs

significantly. Thus, it was hypothesized that households having earned a higher proportion of their total family income from off-farm jobs would be more inclined to transfer their land use rights.

Results

Among the 539 households in the survey, only 30 households had ever engaged in transfer of land use rights, reflecting the low rate of activity in Hebei province. When asked about their willingness to transfer their land use rights, 196 households gave a positive response (36.36% of the sample). The remainder (343 households) indicated that they had no desire to transfer their land use right at the current time.

TABLE 2 CHARACTERISTICS OF SAMPLE HOUSEHOLDS

| Variable | S | L | Xu | L | Xi | R | Y | M |
|------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Social Security¹ | | | | | | | | |
| 1 | 10% | 9% | 12% | 15% | 6% | 17% | 13% | 12% |
| 2 | 57% | 77% | 63% | 75% | 52% | 63% | 76% | 82% |
| 3 | 33% | 14% | 25% | 10% | 42% | 20% | 11% | 6% |
| Freedom² | | | | | | | | |
| 1 | 15% | 6% | 19% | 14% | 16% | 19% | 15% | 20% |
| 2 | 31% | 67% | 63% | 57% | 52% | 53% | 63% | 61% |
| 3 | 54% | 27% | 18% | 29% | 32% | 28% | 22% | 19% |
| Family Size | | | | | | | | |
| ≤2 | 18% | 17% | 9% | 22% | 15% | 16% | 8% | 16% |
| 3 | 32% | 40% | 35% | 35% | 24% | 42% | 22% | 31% |
| 4 | 29% | 33% | 41% | 37% | 40% | 35% | 25% | 33% |
| ≥5 | 21% | 10% | 15% | 6% | 21% | 7% | 45% | 20% |
| Farming Returns (RMB) | | | | | | | | |
| <2000 | 15% | 7% | 21% | 3% | 20% | 14% | 18% | 3% |
| 2000-5000 | 21% | 20% | 22% | 18% | 44% | 13% | 48% | 39% |
| 5000-7000 | 42% | 57% | 49% | 63% | 30% | 55% | 17% | 46% |
| >7000 | 22% | 16% | 8% | 16% | 6% | 18% | 17% | 12% |
| Education³ | | | | | | | | |
| 1 | 21% | 17% | 28% | 29% | 21% | 39% | 27% | 17% |
| 2 | 25% | 57% | 41% | 39% | 52% | 47% | 56% | 50% |
| 3 | 36% | 22% | 20% | 17% | 10% | 11% | 13% | 21% |
| 4 | 18% | 4% | 11% | 15% | 17% | 3% | 4% | 12% |
| Income Ratio⁴ | | | | | | | | |
| ≤20 | 4% | 10% | 46% | 27% | 35% | 26% | 18% | 33% |
| 20%-40% | 6% | 42% | 36% | 40% | 41% | 36% | 47% | 38% |
| 40%-60% | 32% | 25% | 15% | 21% | 16% | 24% | 31% | 21% |
| ≥60 | 58% | 23% | 3% | 12% | 8% | 14% | 4% | 8% |

1 Household assessment of adequacy of social security: none = 1, some but insufficient = 2, and adequate = 3

2 Household assessment of freedom to transfer land use rights at a reasonable price: no freedom = 1, partial freedom = 2 and full freedom = 3

3 Primary education or under = 1, completed junior middle school = 2, completed senior middle school = 3, and some post-secondary education = 4

4 Ratio of non-farm income to total household income

A statistical description of the data collected is shown in Table 2. Of the 539 respondents, only 58 (10.8%) felt their household had adequate social security. Most of those who felt they did not have adequate social security indicated that they would not be willing to transfer their land use rights. Less than half of the respondents indicated that they had full freedom when choosing terms of any potential transfer of land use rights. About 65% of the families in the survey (349 out of 539) were of a medium size, i.e., three or four persons in the household. A slightly higher proportion of the small families indicated a willingness to transfer their land use rights. The average income from farming activities was 6232 RMB; (it should be noted that average household income in Hebei was 19,911 RMB in 2007) (HLSS, 2008b). A majority of the household heads surveyed had completed junior middle school, secondary middle school or had some postsecondary training. The average ratio of off-farm income to total income was 37%. In the survey, it was found that as the ratio increased, a higher proportion of households indicated a willingness to transfer their land use rights.

The mean levels of the variables used in the logistic estimation are in Table 3 and the results of the estimation are in Table 4. The explanatory power of the estimated model (as revealed by the McFadden R-squared) is 0.627. Since the estimation was based on cross-sectional data collected under very difficult circumstances where most people have low levels of education, and many are somewhat dismayed at their inadequate levels of social security and freedom to transfer their land use rights, this can be considered quite a strong result. Three of the six explanatory variables were statistically significant at the 5% level and most of the others, though not statistically significant, had the hypothesized sign.

TABLE 3 MEAN LEVELS OF VARIABLES IN LOGISTIC MODEL

| Variable | Mean |
|-----------------------|------|
| Social Security | 2.21 |
| Freedom | 2.39 |
| Family Size | 3.7 |
| Farming Returns (RMB) | 6232 |
| Education | 2.00 |
| Income Ratio | 37% |

Three explanatory variables in the logistic regression analysis were statistically significant at the 5% level: freedom to transfer land use rights at a reasonable price, ratio of off-farm income to total income, and social security (Table 4).

TABLE 4 REGRESSION ESTIMATES FOR FACTORS AFFECTING FARMER'S WILLINGNESS TO TRANSFER THEIR LAND USE RIGHTS IN HEBEI

| Variable | Coefficient | Std. Error |
|------------------------|-------------|------------|
| Social Security* | 3.621 | 1.701 |
| Freedom* | 1.524 | 0.576 |
| Family Size | 0.268 | 0.399 |
| Farming Returns | -0.147 | 0.566 |
| Educational Level | 0.146 | 0.453 |
| Non-farm/total income* | 3.755 | 1.693 |
| Constant | -11.528 | 2.628 |

* indicates significance at the 5% level

McFadden R-squared = 0.627

As expected, the estimated coefficient on social security was positive and statistically significant. The social security system in China has treated rural residents differently compared to urban residents and often has been criticized for enlarging the rural and urban income gap. In rural areas of Hebei, farmers receive very little government assistance for their medical needs. Most have very small pension eligibility. For example, the average pension for each beneficiary in rural Hebei was only 695 RMB per year, only 6.71% of the 10,325 RMB received by urban residents of Hebei (Ma, 2009). Also, the level of subsidy available for rural residents below the poverty line (known as the minimum living standard) was only 398 RMB per year in rural areas in 2006 as compared to 995 RMB in urban areas (Ma, 2009). In the survey carried out in this study, only 10% of households interviewed responded that they had sufficient social security. Most rural households generally felt uncertain about their future lives and a high majority of them indicated that they would not be willing to transfer their land use rights. Even in some cases where the land is no longer cultivated, many households indicated that they would not transfer their land use rights. When the government fails to provide adequate social security for farm households, agricultural land acts as a kind of social insurance and functions as both employment insurance and pension supplier. Therefore, the absence of a social security system in rural areas has hindered the transfer of farmers' land use rights.

Farmer's perceptions of their freedom to transfer land use rights at a reasonable price had a statistically significant, positive effect on their willingness to transfer their land use rights, consistent with prior expectations and results of previous studies. When farmers are under duress and lack freedom to make their own decisions regarding price and other terms of transfer of land use rights, they often are unwilling to engage in the process. This frustrates the objectives of land use laws that have been designed to encourage

the transfer process. Village cadres and others who impose conditions on the transfer of land use rights undermine the development of the transfer market and make a fair pricing mechanism hard to achieve. Where intervention occurs, farmers are unable to obtain reliable information on demand for their land use rights, and also make those who have low social status or weak political power more vulnerable.

The estimated coefficient for the ratio of off-farm income to total income also had a statistically significant positive sign. Farmers count on the use of their farmland to provide their families with a living when they do not have available access to off-farm employment. Access to non-farm employment opportunities, a substitute for land in terms of securing farmers' livelihoods, promotes farmers' willingness to transfer their land use rights. In Hebei, where the economy is largely based on agriculture, farm income still accounts for a big proportion of the income structure of most farm households. This means that farmers who dispose of their land use rights face risks for supporting their families in the future.

The estimated coefficients for the other three variables (family size, farming returns and educational level) were not statistically significant.

Conclusions

In rural China, where the social security system has long been inadequate to meet the needs of rural households, and the access to agricultural land acts as a form of social insurance by providing employment, food for the family and some form of pension for the old age. This study provides further convincing evidence that an inadequate social security system in rural China inhibits the transfer of land use rights. Improvement in the social security system for rural residents is a prerequisite to increasing the rate of transfers of land use rights in rural areas.

The collective ownership of farm land results in tenure insecurity (Ho, 2005). Insecure land tenure has not only led to behaviours that frustrate farmers' interests, but also has caused additional externalities and transaction costs, such as the costs of dealing with disputes, law suits and social unrest. In China, privatisation is incompatible with the socialist ideology. To guarantee farmers with more secure land tenure, the Law on Land Contracts in Rural Areas which was enacted on March 1, 2003 to formulate the "principle of participation voluntariness". "Farmers transact in the cultivated land market on a voluntary

basis; local authorities can neither revise the contract nor reclaim the land awarded during the course of the contract." However, current laws do not involve specific regulations on how to execute the principle of voluntariness. Therefore, emphasis on the principle of voluntary participation should be strengthened by formulating further regulations on the responsibilities and rights of rural households, village, and township, respectively, and any kind of political intervention to farmers' land use rights transfer in terms of price, means, and profit distribution should be affirmed to be illegal.

Where members of farm households have easy access to off-farm employment, such opportunities can serve as a substitute for land in terms of securing farmers' livelihood. With off-farm earning possibilities, rural households are much more inclined to transfer their land use rights. In areas where off-farm employment opportunities are few and far between, governments can be helpful by encouraging the development and growth of off-farm employment opportunities. These types of developments would increase farmers' willingness to transfer their land use rights.

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